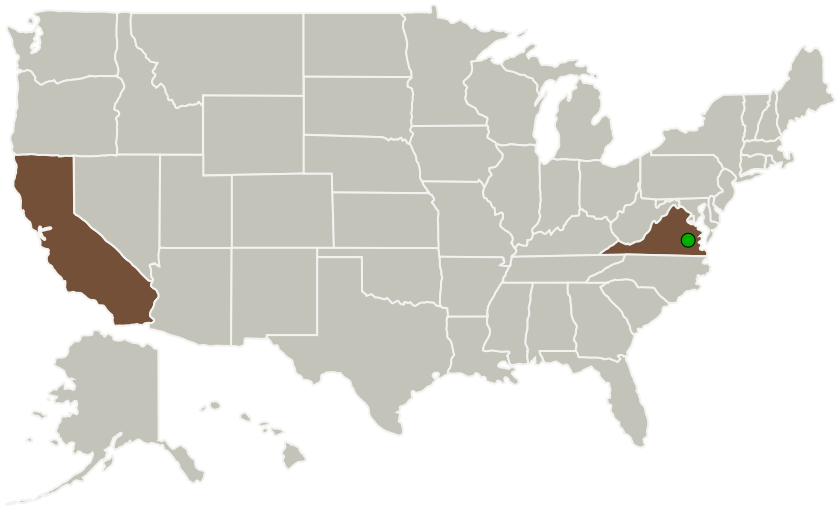
Space Qualified Heterogeneous Processing, Phase I

Completed Technology Project (2013 - 2013)

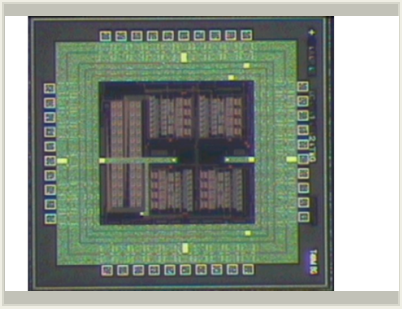
Project Introduction

Space Micro proposes to develop a radiation hardened, monolithic, heterogeneous processor for space imaging and radar systems. High performance processors are needed because many space systems generate copious amounts of sensor data at high data rates. The extraction of information from such data streams requires high speed data reduction. Parallel processing may be required to keep pace with the data stream, and that processing often requires application of sophisticated digital filtering or compression algorithms. The results of the signal processing then require aggregation and additional processing to produce actionable information to be used either on the satellite or downloaded to the mission controller.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
Space Micro, Inc.	Lead Organization	Industry	San Diego, California
Langley Research Center(LaRC)	Supporting Organization	NASA Center	Hampton, Virginia



Space Qualified Heterogeneous Processing

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Primary U.S. Work Locations	
California	Virginia

Project Transitions

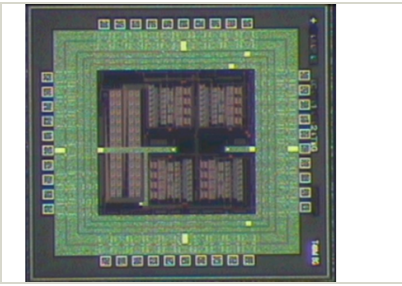
May 2013: Project Start

November 2013: Closed out

Closeout Documentation:

- Final Summary Chart*(https://techport.nasa.gov/file/138521)*

Images



Project Image
Space Qualified Heterogeneous Processing
(https://techport.nasa.gov/image/130474)

Organizational Responsibility

Responsible Mission Directorate:
Space Technology Mission Directorate (STMD)

Lead Organization:
Space Micro, Inc.

Responsible Program:
Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:
Jason L Kessler

Program Manager:
Carlos Torrez

Principal Investigator:
Bert R Vermeire

Co-Investigator:
Bert Vermeire

Space Qualified Heterogeneous Processing, Phase I

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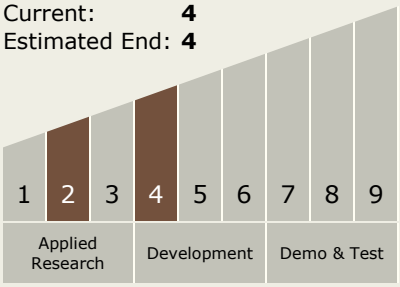
Technology Maturity (TRL)

Start: **2**
Current: **4**
Estimated End: **4**



Technology Areas

Primary:

- TX11 Software, Modeling, Simulation, and Information Processing
  - TX11.4 Information Processing
    - TX11.4.1 Science, Engineering, and Mission Data Lifecycle

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System